

ciously promised to the industry of successive generations. Within the last six years, quinine, piperine, and the uses of the prussiate have been discovered, and our little children are no longer made to suffer repeated attacks of ague, till the cure be attained by bark injections and jackets, or their systems rendered unsusceptible of fever by the poisonous debilitation of arsenic.

ART. XII. *Description of an Instrument designed to facilitate the introduction of Ligatures into and around Deeply-seated Parts, as in cases of Fistula in Ano, &c.* By J. K. MITCHELL, M. D. one of the Physicians of the Pennsylvania Hospital and of the Almshouse Infirmary.

THE instrument consists of two limbs with handles, united by a joint similar to that used in such obstetric forceps as have a screw. The limbs are hollow, and are so curved, that when the handles are approximated, the opposite ends meet, and one of them passes a very little way into the other, so as to make a continuous canal from one limb to the other. That limb which enters the other is made with such a cutting edge as is formed in the punch of the saddler or shoemaker.

When it is applied in a case of fistula in ano, the limbs are separated, and the one with a punch-like extremity is passed into the fistula as high as possible; after which, the other is inserted into the rectum, and the joint then made fast by means of the screw. By bringing the handles towards each other, the ends of the limbs are made to approach and finally to meet, and one passes into the other.

In some cases, as in complete fistulæ, nothing is cut, in some cases the intestine only is perforated, and in others a portion of cellular matter must be penetrated.

When the canal has been made continuous, a piece of watch-spring, sharpened at one end,* and armed at the other with a ligature may be passed without much difficulty along the canal, through the fistula and out at the rectum, drawing the ligature after it. When the ligature is drawn through, it is separated from the spring, and the limbs

* The sharpening the end of the watch-spring was suggested by Dr. Thomas T. Hewson.

being disunited are successively withdrawn, leaving the ligature behind them.

On the 21st of June, 1828, Dr. HEWSON did me the favour to apply this instrument, in a case at the Pennsylvania Hospital, where from the extent of the parts between the fistulous canal and the rectum, the use of the knife might have been hazardous. In all such cases, and in those extending to a point beyond the reach of the finger, such an instrument will perhaps be found a convenient mean for the introduction of a ligature.

It might also perhaps be found useful to conduct a ligature around a deeply seated artery,* and by no means an inconvenient method of applying a band to the root of an internal tumour, when so situated as to prevent the use of the double cannula.

The essential parts of the instrument are the joint admitting of the separation of the limbs, the hollowed limbs, and the punch-like extremity of one limb capable of entering the other; together with a watch-spring so curved as to pass readily along the hollowed limbs. The form and size of the instrument might be variously modified to suit various cases; and, as in the several obstetric forceps, the joint might be diversified.

It is easy to suppose that, by means of such a joint, a limb like a bistoury either sharp or probe-pointed, might be substituted for the perforating limb of the instrument; and, after introduction of both the bistoury limb and the other, the locking of the joint and the closing of the forceps, the simply withdrawing the instrument, would cut through all the parts usually divided in operations for fistula in ano.

A more slender instrument formed nearly like the one delineated in the accompanying figure, Pl. V. might be advantageously used, when it is thought expedient to pierce the *os unguis*, in some forms of *fistula lachrymalis*.

The instrument was made by Mr. Schively, surgeon's instrument maker.

* In using it for an artery, the limbs need not be separated; the ends being a little distance apart, will pass one on each side of the artery, and when beneath it they may be brought into contact; and the ligature can then be passed around it.